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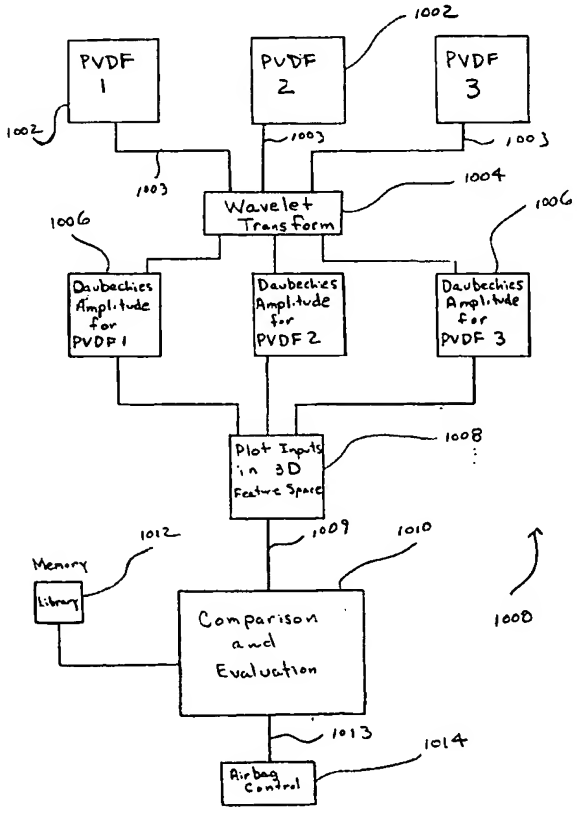
(54) Title: CRASH SENSING VIA PIEZOELECTRIC SENSORS



(57) Abstract: A system and method for characterizing piezoelectric sensor responses for automotive vehicle crash analysis, is disclosed. The method employs Daubechies wavelet analysis (1006) to plot signal response amplitudes (1008) in three-dimensional space of at least one piezoelectric sensor. A cluster, signifying a combination of Daubechies amplitudes of the at least one piezoelectric sensor in three-dimensional space, is compared to reference clusters (1010) stored in the automotive vehicle. Based on results from comparing the cluster to the reference clusters, instructions are transmitted to an occupant restraint control system (1013) in the vehicle to deploy a specific airbag at a specific power level.

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